kevin.murray@mabeymurray.com
Direct Dial: (801) 320-6754

Mabey Murray LC

February 14, 2006

Via Electronic and Regular Mail

Matthew Cohn, Esq.
U.S. Environmental Protection Agency
Region VIII
999 18th Street, Suite 300
Denver, CO 80202-2466

Re: Vermiculite Intermountain Site – Salt Lake City, Utah

Dear Matt:

This is in response to the letter addressed to you from Brian W. Burnett on behalf of the Van Cott Bagley Cornwall & McCarthy Profit Sharing Trust (the "Trust"), dated January 13, 2006 (the "Trust Allocation Letter"). PacifiCorp has previously set out its analysis of the factors the company believes EPA should consider and weigh in arriving at a fair and reasonable allocation of costs in this matter, particularly in our letter to you dated June 14, 2005. The purpose of this letter is to provide specific comments in response to the Trust Allocation Letter.

1. Hazardous Substance Disposal Prior to 1954. The Trust Allocation Letter attempts to divert attention away from real liability issues by arguing that PacifiCorp's length of property ownership prior to 1954 is somehow relevant to cost allocation. With respect to the period prior to 1954, any liability PacifiCorp may have under CERCLA could only be based upon Section 107(a)(2), which imposes liability on persons who owned or operated the facility "at the time of disposal of any hazardous substance . . . ." 42 U.S.C. Section 9607(a)(2). In that case, the Trust would have to establish that it is more likely than not that "during [PacifiCorp's] ownership and operation, [Utah Lumber] released or disposed of hazardous substances, as defined by CERCLA." Tosco Corp. v. Koch Industries, Inc., 216 F.3d 886, 892 (10th Cir. 2000). As to periods prior to 1954, the Trust has not and cannot satisfy this burden of proof given available historical information.

PacifiCorp finds it curious that the Trust relies on Tosco Corp. to support its position that PacifiCorp should bear most of the liability here. A proper reading of the

Tenth Circuit's decision clearly shows that the Trust's assertion does not stand. In that case, Tosco brought a CERCLA contribution claim against Koch based on section 107(a)(2) arising from Koch's previous ownership and operation of a petroleum refinery. Applying a "totality of the circumstances" approach, the Tenth Circuit found that the lack of "eyewitness testimony or other direct evidence" of hazardous substance disposal during Koch's period of refinery operations (in the 1940s) was not determinative. "It is sufficient, therefore, that Tosco presented a wealth of circumstantial evidence showing disposals of hazardous waste." Tosco Corp., 216 F.3d at 892. The "wealth of circumstantial evidence" included evidence that refinery operations during the 1940s "generated numerous hazardous substances and wastes" and evidence that "Koch itself operated numerous unlined waste ponds and pits, oil skimming ponds, sumps, settling ponds, cooling ponds, holding ponds, and drainage ditches, and an asphalt pit area and underground pipelines for waste disposal." Tosco, 216 F.3d at 892 n.2. The circumstantial evidence also included references of "numerous product and chemical spills and leaks [that] occurred from tanks, ditches, pipelines, process units and waste areas," and included "Koch's own documents indicat[ing] that Koch could not account for seven percent of its daily throughput . . . ." Id.

By contrast here, the Trust has presented little, if any, probative evidence—let alone "a wealth of circumstantial evidence." The single reference in the Sanborn map to "Insulating Material Works and Rock Grinding"—relied on so heavily by the Trust—is entirely inconclusive. Sawdust was a very common insulating material prior to the advent of more modern materials such as rock wool, vermiculite, and fiberglass. It is also common knowledge that sawdust for insulation may be mixed with lime in order to prevent rot and absorb moisture. Sawdust was also a common ingredient in mortar due to its insulating value. *See* documents attached hereto as Exhibit A. Based on this circumstantial evidence, it is therefore just as likely as not that Intermountain Insulation was using the property to manufacture and distribute insulation made from sawdust derived from the operations of Utah Lumber. At the same time, the Sanborn Map's reference to "Rock Grinding" does not directly or indirectly suggest that vermiculite was exfoliated, stored, distributed, or otherwise managed on the property prior to 1954. Again, it is just as likely as not that Intermountain Insulation (and/or Utah Lumber) was grinding limestone rock for the manufacture of lime, Portland cement, aggregate, or other common building materials. In sum, the single reference on the Sanborn map hardly constitutes circumstantial evidence that "disposal" of a CERCLA-defined hazardous substance occurred at the property prior to 1954.

On the other hand, as PacifiCorp has previously established, the "wealth of circumstantial evidence" in this case strongly suggests that Vermiculite Intermountain did not operate any exfoliation plant until after it purchased the property in 1954, the same year Intermountain Insulation changed its name to Vermiculite Intermountain. These facts are consistent with the 1952 memorandum establishing that no Zonolite

was produced on the property until after 1954: "[I]t appears from statements of the Utah Lumber Company that they have been depending on obtaining a piece of this property to carry out certain plans to develop a Zonolite production plant and have made commitments for the equipment to go into such a plant so that Messrs. Irvine would be in quite an embarrassing position if we do not permit them to purchase a certain portion of our land." A copy of this Memorandum is attached hereto as Exhibit B. Under the "totality of the circumstances" approach endorsed by the Tenth Circuit, the Trust cannot possibly carry its burden of proof that PacifiCorp is liable under Section 107(a) (2) for periods of time prior to 1954. In this respect, many additional facts are set forth in PacifiCorp's previous correspondence to you and the Trust, as well in the Site History prepared by PacifiCorp.

The conclusion that the contamination at issue here occurred after 1954 is also consistent with the physical evidence found during PacifiCorp's removal action work. The largest source area of asbestos on the property was exfoliation processing waste found around and under the area where the exfoliation plant was located. The process waste consisted of un-expanded vermiculite ore and pebbles, with discernable bundles of asbestos. This material contained 35% Libby Amphibole asbestos by volume and almost no soil, exactly what would be expected to remain after the expandable vermiculite had been removed from the raw ore. PacifiCorp has retained samples of this material if EPA or the Trust would like to have it analyzed. The waste area was approximately 110 feet by 75 feet by 6 feet deep and most likely was placed in the basement of the 1890s-era foundation on which the exfoliation plant was built (after 1954). A large portion of PacifiCorp's project costs relate to the management and disposal of the process wastes excavated from this area.

2. Relative Length of Property Ownership. In comparing relative length of ownership, the appropriate focus should be during the years that Vermiculite Intermountain was operating at the Site. Although PacifiCorp agrees that the period from 1954 through 1979 should be considered an orphan share, it is clear that the Trust acquired the property on August 31, 1979 and conveyed it to PacifiCorp on June 7, 1984, a period of about 58 months. Available historical records indicate that Vermiculite Intermountain apparently operated on the property for about seven months in 1984 while PacifiCorp was the record owner, although during that time the Trust continued its property management role (communicating with Vermiculite Intermountain, its holdover tenant, collecting rent, etc.). Thus, even if 100% of the final seven month period were attributed to PacifiCorp, the Trust owned the property for about 89 percent of the time of Vermiculite Intermountain's operations (the only time that the evidence shows that contamination occurred), and PacifiCorp, on the other hand, owned the property for about 11 percent of the time. If the final seven months of Vermiculite Intermountain's operations were more properly shared equally by the Trust and PacifiCorp, the percentage shares would be about 94 percent and 6 percent, respectively.

In conclusion, PacifiCorp believes that the allocation framework set forth in its June 14, 2005 letter is both reasonable and fair. We appreciate your consideration of the matters raised in this letter. Please feel free to contact me if you have any questions or comments.

Very truly yours,

Mabey Murray LC

Kevin R. Murray

cc: Kelcey Land, ENF-RC
Joyce Ackerman, EPR-SA
Mike Jenkins
Brian Burnett
Paul Phillips
Stephen Swindle
Mike Keller

EXHIBIT A

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Questions about home construction and improvement? Ask the Sound Home Consultant, or review hundreds of indexed questions and answers. If you've got a question that isn't asked here, ask George, the Sound Home Consultant!

SOUND HOME RESOURCE CENTER
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Questions & Answers from the Sound Home Consultant #271-280

Wood Fiber as Insulation

Q - We have bought an older bungalow which uses wood shavings as insulation in the attic. The shavings appear to be quite new! What are the issues that we should be aware of? What is the existing R-value (the shavings cover the joists - about 6 inches deep). Can we install additional insulation over the top of the existing, or do we need to remove the shavings?
Denise

A - Wood fiber, in the form of shavings, sawdust etc. was a common 'early' form of insulation. My home was insulated with such material when built in the 1950's. Depending on the exact product, the insulation value of such insulation is usually a bit less than a comparable thickness of fiberglass, rock wool or cellulose (newspaper - another form of wood fiber) insulation. I would estimate that the insulation value of the 6 inches in your attic to be less than R-19.

The only potential problem in adding insulation on top of the existing material is related to the possible existence of 'tube and knob' wiring. Such wiring should not be covered with insulation, it requires air circulation for cooling.

Before adding insulation check all of the heating ducts, electrical wiring, recessed lights, screening at the various roof vents, bathroom fan ducts, etc. If you have any doubts about the condition of any such item, have it checked out by a professional in the field, and have any repairs made prior to adding any insulation. For example, all fan ducts must be vented

to the outside, and most recessed light housings should not be covered with insulation. Also, make sure that the roof is properly vented.

You may add unfaced batt or fill insulation on top of the existing insulation material. Don't add any plastic, foil, craft paper, or other vapor barrier. The vapor barrier (if any) belongs on the warm side of the insulation (the bottom side in an attic). Be sure that the insulation does not block any of the roof venting.

How much insulation is enough? I don't know the code in your part of Canada, but I suspect that R-38 would be a minimum. That translates into 6-8" of fill insulation on top of the wood shavings.
George

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Ongoing Water Seepage into the Crawl Space

Q - My House is on a slope. The crawl space is about 8 ft high. The ground in the crawl space has two levels. Even with light rain there is water seepage from the side of the step. There are two drain holes at the lower corners. Is the seepage normal? The house is 6 years old. What should I do if it is not? There is no evidence of moisture yet.
Andy in Portland

A - Yes, your home may be located on a lot with ongoing seepage. Is sounds as if you have a very large crawl space, and that should help you cope with this situation. I am assuming that the roof drainage and grading at the perimeter of the house is in good order. If all that is O.K., here are the next few steps:

First of all, I would create a channel for the drainage to exit the crawl space and drain to the outside. The "two drain holes at...." may have been intended for that purpose. I can't tell (my Email spy glasses are not working). I would then install a perforated drain tile into the channel and encase the drain tile in gravel. Once this is done, I would cover the whole area with a plastic vapor barrier.

The second step is to make sure that you have lots of screened crawl space vents and lots of cross ventilation through the crawl space. This crawl space is a good candidate for additional venting.

Once this system is in place, take a look at the crawl space from time to time to make sure that all of the drainage is contained in the channel and under the vapor barrier.
George

The Old Sawdust Pile
Timber Terrace Golf Course,
1117 Pumphouse Rd., Chippewa Falls

This sawdust deposit is remnant of the huge pile of sawdust and shavings that accumulated between 1885 and 1911 from the finishing of millions of feet of white pine lumber in the Planing Mill located in the old lumberyard (known as the "Flats"). A season's cut at the "Big Mill" ran toward 60,000,000 board feet.

The "Pile" provided sawdust and shavings for insulation of homes and worms for fishing bait. There were times when fires burned out-of-control in its depths.

This is considered "Hallowed ground" by many who played here as youngsters between 1895 and 1950.

Chippewa County Historical Society
Historic Sign #19

Site Funded by The Family and Community Network, Photo Credits-(c)Maureen K. Steltz
Chippewa Falls 2010, and the Chippewa County Tourism Council
Can't find it? Call 1-866-723-0331 or send e-mail to Chamber of Commerce

Identifying Old Insulation

Material	Description	R-Value per Inch*
Fiberglass batts	Pink, yellow, or white; blanketlike	3.0
Loose-fill fiberglass	Pink, yellow, or white loose fibrous material	2.5
Loose-fill rock wool	Denser than fiberglass, "wooly," usually gray with black specks (some newer products are white)	2.8
Loose-fill cellulose	Shredded newspaper, gray, "dusty"	3.4
Vermiculite	Gray or brown granules	2.7
Perlite	White or yellow granules	2.7
Miscellaneous wood products	Sawdust, redwood bark, balsa wood	1.0
Expanded polystyrene board	Rigid plastic foam board (may be labeled)	3.8
Extruded polystyrene board	Rigid plastic foam board (may be labeled)	4.8
Polyisocyanurate board	Rigid plastic foam board (may be labeled)	5.8
Spray polyurethane foam	Plastic foam, uneven surface	5.9
Urea formaldehyde foam+	Whitish gray or yellow, very brittle foam	4.0
Asbestos++	May be mixed with other materials; difficult to identify	1.0

* These R-values are for old insulation only. They take into account settling, as well as average R-values for old materials.
+ Urea formaldehyde foam is no longer sold due to concerns about formaldehyde outgassing.
++ If you suspect that you have asbestos, consult a hazardous material specialist before you disturb the insulation.

Sources: PG&E Stockton Training Center, *1993 ASHRAE Handbook of Fundamentals, DOE Insulation Fact Sheet*

Excerpted from No-Regrets Remodeling by Home Energy magazine

DayCreek Journal
January 14, 2001

Insulation for Double Wall Cordwood
All materials conduct heat, some more than others. Materials such as copper, steel, aluminum, glass and concrete are good conductors of heat; whereas wood, paper, fiberglass, cellulose and mineral wool are poor conductors. Materials that are poor conductors of heat are good insulators. Insulating materials have a high level of resistance to conduct heat. This resistance is measured in R-value. The higher the R-value, the better it is as insulation. Here's a list of some insulation materials that could be used as loose fill insulation for our double wall cordwood project:

(Values are from the University of Purdue Agriculture Department and the U.S. Department of Energy. All materials are expressed in terms of R-value per inch.)

Material	R-Value per inch
Cellulose	3.13 - 3.70
Glass or Rock Wool	2.50 - 3.00
Vermiculite (Expanded)	2.20
Shavings or Sawdust	2.22
Perlite	2.70
Expanded Polystyrene (Molded Beads)	3.57

Natural vs. Unnatural Insulation
During the course of building the house, I have received letters from some asking if I have strayed a bit off of the path of building a natural house. There's no doubt about it, our house will not be built out of 100% naturally found materials. I do make an effort to use natural products where it makes sense. There are always tradeoffs to consider.

Our goal is to build the house with as many natural materials as possible, wherever it makes sense to do so and to keep the impact upon the earth to a minimum. There are instances in which a less earth-friendly material may become the best environmental option over the life expectancy of a house. For example, I used extruded polystyrene under the floor of the house to insulate the heated floor from the subsoil. Polystyrene is about the only material suitable for insulating under a floor. If I had not used the insulation, quite a bit of heat would be lost to the subsoil. This would increase the need for burning more fuel, which in turn would have a greater impact on the environment over the long-run by using more nonrenewable energy and adding to air pollution. The less nonrenewable energy we use to heat and cool the house will far surpass the impact of using some unnatural materials to build the house.

Insulation comes in both natural and unnatural forms. You can insulate a house with dried leaves, straw, feathers, wool, cotton, saw dust or just about any other organic product that does a reasonable job of preventing heat flow. You can also insulate a house using fiberglass, rock wool, and different forms of foam insulation.

Fiberglass insulation is made using high-temperature gas furnaces and uses 20 to 30 percent recycled glass. Rock wool is made from the scum of molten metal and although it is a byproduct that would normally get pitched, it requires lots of energy to be produced along with the pollutants that the factories generate. Polystyrene and polyurethane are made from petroleum byproducts and other chemicals. Although it's R-value is exceptional, it's as about as unnatural of a product as you can get.

Narrowing Down the Options
A double wall cordwood wall by itself will increase the R-value of the wall by creating a thermal break between the interior and exterior walls. Taking this into consideration, I decided not to get "hell-bent" over the R-value of different forms of insulation. As a matter of fact, I am excluding any unnatural or

over the R-value of different forms of insulation. As a matter of fact, I am excluding any unnatural or "Earth-Unfriendly" form of insulation and just focusing on natural products.

Cellulose is certainly an option to consider. It's made out of shredded newspaper that is treated with boron and borax to make it fire resistant. It is commonly used in attics, but it can be used in walls as long as it is densely packed to prevent settling problems. This decreases the R-value slightly, but it is still a very good option. The only disadvantage I have found is the cost. Although it is not as expensive as some other forms of insulation, it would probably cost about $700 to dense-pack all 32 walls. I actually have made my own cellulose using a leaf shredder and newspaper. It works, but is extremely messy and time consuming. Too much work for too little of a gain.

Out of all the other natural options, sawdust seems to be the best option. It's got good R-value and when mixed with hydrated lime (Thank You Jack Henstridge!), it creates a insect resistant insulation that sets up like beadboard if any moisture gets into the mix. This was confirmed by Ed McAllen who told me in a recent conversation that he had to remove a log from a wall to install an electrical line. When Ed finally got the log out, the sawdust-lime insulation stayed in place and did not fall out of the cavity. It's texture was similar to beadboard.

This sounds like a winner to me. There's plenty of sawdust available from sawmills in the area for little or no cost. Lime is cheap too. So, after deliberating all the factors, sawdust is the winner.

So, what kind of R-value should I be able to get out of the wall? The wall will consist of 8" of logs and mortar on the interior, followed by 8" of sawdust and finally 8" of logs and papercrete on the exterior (providing I find a good source of paper pulp or newspapers).

Pine is a fairly airy wood, so the logs themselves should give about an R1.5 per inch. Mortar is about R.5 per inch and papercrete (Jim Juczak version) is about R2 per inch. Sawdust is about R2 per inch. With all of the R values known, we can compute an estimated R value for the cordwood wall:

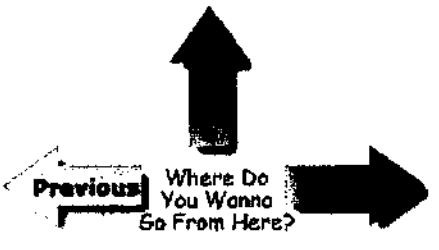
Interior wall = 8" of wood and mortar (80% wood, 20% mortar). 8" x 1.5 = 12 | 8" x .5 = 4 | 80% of R12=9.6 | 20% of R4=.8 | 9.6 + .8 = R10.4

Wall cavity = 8" of sawdust @ R2.2 = ~R17

Exterior wall = 8" of wood and papercrete (80% wood, 20% mortar). 8" x 1.5 = 12 | 8" x 2 = 16 | 80% of R12 = R9.6 | 20% of R16=R3.2 | 9.6 + 3.2 = R12.8

Total Wall R Value = ~R40

At this point, I am still considering using papercrete mortar for the exterior wall. If I can find a good, local source of paper pulp or if I'm ambitious enough to slurry newspapers, I'll probably stick with the above configuration. If I were to just use regular old cordwood mortar on both walls, the R value would be approximately R38.



D Acres of New Hampshire

Organic Farm & Educational Homestead

Alternative Building Weekend Workshop

August 20-22, 2004

featuring:

Field Stone Masonry

Incorporating Adobe Bricks into a Building Project

Cordwood Construction

and a few words about walls!

Compiled by staff and work-traders at D Acres of NH.

direction of the wall. After several inches of straw and mortar layers, lay in two ½" branches parallel along the wall and then continue this pattern until the plate is about a foot thick. If it is a curved wall, green (fresh) willow is good because you will be able to bend it to the curve and then it will harden in that orientation when it dries. You can set the rafters on this plate and snug them in with cob around them. (See Diagram 4 - Top Plate)

Running Stove Pipes Through the Wall:

To supplement the passive solar design for the greenhouse/animal shelter complex we will include two stoves. Although they will be in the greenhouse, we will run the pipes through the walls at the interface between the greenhouse and the animal shelter. The idea is not only to heat up both spaces simultaneously, but also to capture as much of the heat escaping out the pipes as possible for storage in the thermal mass of the earthen wall. The pipes will be 6" in diameter, which will allow us 3" either side on a 12" thick wall. The pipe will run vertical in some portions and horizontal in others on its way out through an adobe wall. One technique for the vertical portion is to span two dowels or branches across each mortar joint on either side of the pipe, which will hold the walls together on either side and provide support to fill the rest in with cob. For the horizontal portion in the adobe wall, the pipe will be embedded in cob set onto the adobe wall and then the bricks will continue on top. (See Diagram 5 - Proposed Vertical & Horizontal Portions of Stove Pipe Running Through Adobe Wall.)

Cordwood Construction

Cordwood is a simple and ingenious building technique that has been practiced in various forms since man began burning and collecting wood. The stacked wood naturally became an integral part of living space for non nomadic people. It has many advantages for the modern builder including beauty, cost, ease of construction, and energy efficiency.

The patterns of cordwood walls are natural and pleasing to the eye. The aesthetic is similar to stone. It is unique and can be constructed in patterns and designs. It is said that it is easier to stack cordwood as roundwood instead of split but the possibilities are endless. As an environmentally friendly art, cordwood building is intrinsic beauty visually and mentally.

Cordwood is readily available in New England. Wood is not cheap but can be located locally. If possible the wood should be cut onsite to save the transportation cost. Per wall foot price is comparable to conventional construction especially considering the wood serves as the bearing wall, insulation, interior and exterior finish. Cordwood construction saves the environment by replacing the fiberglass insulation or vinyl siding that might otherwise be used.

This type of construction is fantastic for owner builders. Stacking one log after another is methodical and progress is readily apparent. The walls can be brought up over time as long as they are protected from rain and moisture. The act of construction is as simple as stacking firewood.

Building materials are judged by their ability to support weight, collect thermal energy, insulate, and deter water infiltration. Cordwood is a unique combination of thermal mass and insulation value. The masonry or cob that forms the mortar holds the thermal energy of the sun and releases it passively during cool nights. It moderates high temperature during the intense heat of the summer. Insulation is measured by an R-rating. Wood is rated at .5-1 R per inch. Sawdust is rated at R-3 per inch. The mortar joint is a nominal R-2. Thus a 12 inch cordwood wall with 6 inches of sawdust approaches an R-12-15 nominal value which is comparable to 5 inches of fiberglass insulation in a stick frame wall.

Cordwood can be used in many forms. The wood can be stacked as infill between the posts of a typical post and beam. To build a load bearing corner of cordwood the wood must be "cribbed" or stacked at 90 degree angles to provide stability to the corner. There is also the roundhouse method in which the walls are connected in a circular pattern.

Cordwood is stacked and mortared together one course at time. The mortar is applied on both ends and sawdust is paced in the middle as insulation. The mortar seals out water and air infiltration. Three inches of mortar is sufficient thickness. The sawdust insulation can be augmented with lime to deter pests. The lime to be used is not ag lime but rather construction type labeled "hydrated, type S, or slaked." If the sawdust lime mixture gets wet it will harden and calcify increasing its strength and stability. Sawdust of less than ¼" nominal size can be added to masonry mix to provide extra insulation and reduced shrinkage. Make sure to soak the sawdust in water prior to mixing with cement or it will accelerate drying and shrinkage (cracking).

The art of cordwood is dependent on working towards the strengths and limitations of the material. Light wood such as cedar and pine are the preferred cordwoods because they have higher insulation and rot resistance value. Hardwood can be used but it swells more than less dense woods. Therefore while soft wood should be dried and seasoned for a year before wall building, the hardwood can be stripped and used after a couple weeks. All bark should be removed as it harbors pests and will promote cracks (drafts) in the wall.

Wood rots with moisture. The fungi that eat wood need moisture to survive and thrive. Cordwood will dry through the end grain if exposed to occasional rain so it is crucial to keep the material as dry as possible. To prevent destruction from rain, roof overhangs of at least 16" are recommended. It is also preferable to keep the cordwood well off the ground to prevent splash from rain and absorption of ground moisture.

Sources:

The Sauna by Rob Roy Chelsea Green 1996
Alternative Housebuilding by Mike McClintock Sterling Publishing 1989
The Cob Builders Handbook—You Can Hand-Sculpt Your Own Home by Becky Bee Chelsea Green 1997

Walls

Walls are what hold the roof up and keep the wind out. The walls provide the portals of access for people, air and sunlight. Wall materials are chosen based on the occupants' and builders' criteria. Conventional stick framing is common because it is quick and simple. Large homes are commonly framed with a 3 person framing crew. The system is popular but relies on kiln dried lumber that has been processed into dimensionally consistent pieces. The parts are put together as a system. Components are produced in standardized sizes. The plywood and drywall come in 4*8' sheets, insulation fits snugly into the typical 2*4 wall cavity, and the building is designed to provide uniform 16" spacing between wall studs. Putting together a stick framed building with a nail gun is standard practice and has been institutionalized through industry and building codes. A 3 bedroom house is normally framed in 2-4 weeks.

The walls of earthen structures are different than conventional walls. They are thicker and heavier. In addition, earthen materials serve as the wall structure and the insulation. While conventional home plans and materials are standardized and duplicated, the earthen home is always unique. The earthen home feels different, sounds are less hollow, the walls are solid (not like drywall), and the temperature is moderated from the extremes of the outdoors.

Conventional and earthen buildings require upkeep. The conventional home requires painting and siding maintenance whereas with the earthen building patching and plaster are needed. Both materials will degrade. Conventional construction is resource and petroleum energy dependent. Earthen structures require more human labor. Conventional and earthen buildings are functional based on quality of design and the craftsmanship of the construction.

Earthen walls must be kept dry. That means a good hat and dry boots. The foundation must be well drained and prevent water from permeating the building. A stone base can protect the walls from rain splash and groundwater absorption. The roof needs adequate overhang. This overhang helps prevent rain from directly hitting the walls. It is also a good idea to prevent flora from growing into the walls. Plants harbor moisture and

EXHIBIT B

EXHIBIT B – 1B

UTAH POWER & LIGHT COMPANY

"Efficient Public Service"

TO Mr. F. G. Irvine FROM O. J. Lowe DATE February 7, 1952

ADDRESS

REPLYING TO DATE OUR FILE NO.

SUBJECT YOUR FILE NO.

Mr. Lee Irvine was again contacted this date regarding purchase by Utah Lumber Company of a portion of the 3rd West Substation site formerly known as the Public Service property.

Mr. Irvine was informed of the Engineering Department's recommendation as to the land that could be disposed of without interferring with the substation operations, namely the area presently occupied by the Lumber Company (35' x 140') plus a rectangular piece of ground approximately 50' x 72.5' adjoining the occupied area on the north. Mr. Irvine immediately appeared to be very much upset and stated flatly that he was not interested. He then asked why the company would not sell him now that property which was included in previous negotiations. Again Mr. Irvine was told that the company was faced with an operating problem from an engineering viewpoint if the land immediately adjacent to the site was sold for occupation. Mr. Irvine then picked up his phone and dialed the Power Company number and asked for Mr. Purton. While waiting for the connection he made the remark he intended to call Mr. Gadsby also.

After the conversation with Mr. Purton, Mr. Irvine repeated most of his objections to the way the negotiations, dating from 1926, had been handled and stated that his main concern was that he had made commitments in the purchase of new equipment in an amount of $15,000 which he planned to install in a building to be constructed on land the Power Company had promised to sell to the Utah Lumber Company. He further stated that in his opinion the Power Company had both a moral and legal obligation to fulfill and that he intended to hold the company to their promise "both written and verbal".

Mr. Irvine was asked to indicate on a sketch of the property the minimum area needed to install and operate the equipment on order. The boundary line marked includes all the area originally offered for sale except a strip approximately 11 feet wide to the east of the present substation site fence. This would leave a clearance of approximately 16 feet between the bus structure of the projected transformer installation and the proposed one story building to be erected by the Lumber Company. The writer was advised by Mr. Irvine that Mr. Purton, during his telephone conversation, had agreed to meet him on the ground and further discuss the possible solution of the problem.